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**Shower tray/shower liner assembly**

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(54) Title  
**SHOWER TRAY/SHOWER LINER ASSEMBLY**

International Patent Classification(s)  
(51)<sup>6</sup> A47K 003/22

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(57) Claim

1. A shower tray/shower liner assembly or a kit to provide such assembly comprising

(i) a shower tray of a sheet plastics material moulded to have a drainable reservoir bounded by a raised peripheral region, which peripheral region has the periphery of the sheet material (whether after trimming or as moulded and whether flanged or not) extending to floor level to at least partly be capable of supporting at least the raised peripheral region of the shower tray from a floor, and wherein said tray is adapted to be positioned in a corner defined between intersecting walls, said raised peripheral region, [except, optionally, all the way into any such a corner,] being capable of (i) substantially butting the walls at or above the periphery of the sheet material or (ii) at least being positioned at least in part proximate to the walls or framing thereof to be covered at least in part by a shower liner and also defining inwardly of said periphery as part of said peripheral region an inwardly facing surface above said reservoir which surface will run parallel to the walls defining such corner except at a region thereof which angles across and thus truncates the corner, and

.../2

(II) a shower liner moulded from a sheet of plastics material to define in plan view, when considered in its erected or erectable condition, an outer surface corresponding to the plan view of said inwardly facing surface against which lower regions of said liner laps and/or butts, or are to lap and/or butt from a direction inwardly of said surface with respect to said reservoir, the shower liner thus defining three panel regions, the central panel region corresponding to the truncation of the corner provided by part of the inwardly facing surface of said shower tray, the central corner truncating panel optionally including moulded therein at least one utility feature selected from the group comprising a soap holder, a footrest, a brush, flannel or the like holder and a shampoo holder.

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## ABSTRACT

A shower installation formed in two parts by moulding sheet plastics material. The tray is adapted for fitment into a corner and the liner is adapted to line the corner 5 save for a truncation of the corner. The tray while supported on its periphery adjacent the walls and the truncation. Nevertheless defines an inwardly facing surface against which outer faces of the liner can lap and/or butt including along the truncation. The region of the liner corresponding to the corner truncation may include utilities such as a soap holder.

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AUSTRALIA

Patents Act 1990

**ORIGINAL  
COMPLETE SPECIFICATION  
STANDARD PATENT**

Application Number:

Lodged:

Invention Title: SHOWER TRAY/SHOWER LINER ASSEMBLY

The following statement is a full description of this invention, including the best method of performing it known to us :-

The present invention relates to improvements in and/or relating shower installations of a kind including factory prepared components. In particular, though not solely, the present invention relates to a shower tray/shower liner assembly, or a kit to provide such an assembly (and related means and methods including the individual components thereof.

The various forms of the factory prepared installation to provide a shower facility are known. These include moulded shower trays (fibreglass or a moulded sheet plastics material) to be used either with standard wall lining material or a factory created shower liner which is moulded from fibreglass or a suitable plastics material.

10 Frequently the whole installation is moulded as a unitary product or is provided in such a way that it is assemblable on site along a horizontal line midway up the wall height. This allows entry into most domestic dwellings for the purpose of installation and overcomes difficulties of assembly at or adjacent to the top of a true tray level.

15 The present invention is related to fittings suitable for incorporation into a corner and which truncates the corner and provides in the area of truncation, a utility feature selected from the group comprising a soap holder, a footrest, a brush, flannel or the like holder and a shampoo holder. The present invention also recognises the benefits of certain sheet materials that are available and advantages that can accrue from a use thereof to mould components assemblable on site or elsewhere.

20 The present invention therefore relates to alternatives to existing shower providing means and methods which will at least provide the public with a useful choice.

The present invention consists in a shower tray/shower liner assembly or a kit

to provide such assembly comprising

(I) a shower tray of a sheet plastics material moulded to have a drainable reservoir bounded by a raised peripheral region, which peripheral region has the periphery of the sheet material (whether after trimming or as moulded and whether flanged or not) extending to floor level to at least partly be capable of supporting at least the raised peripheral region of the shower tray from a floor, and wherein said tray is adapted to be positioned in a corner defined between intersecting walls, said raised peripheral region, [except, optionally, all the way into any such a corner,] being capable of (i) substantially butting the walls at or above the periphery of the sheet material or (ii) at least being positioned at least in part proximate to the walls or framing thereof to be covered at least in part by a shower liner and also defining inwardly of said periphery as part of said peripheral region an inwardly facing surface above said reservoir which surface will run parallel to the walls defining such corner except at a region thereof which angles across and thus truncates the corner, and

(II) a shower liner moulded from a sheet of plastics material to define in plan view, when considered in its erected or erectable condition, an outer surface corresponding to the plan view of said inwardly facing surface against which lower regions of said liner laps and/or butts, or are to lap and/or butt from a direction inwardly of said surface with respect to said reservoir, the shower liner thus defining three panel regions, the central panel region corresponding to the truncation of the corner provided by part of the inwardly facing surface of said shower tray, the central corner truncating panel optionally including moulded therein at least one utility feature selected from the group comprising a soap holder, a footrest, a brush, flannel or the like

holder and a shampoo holder.

Preferably at least one utility feature is present in said central panel region.

Preferably the plastics material of each of the tray and liner is of acrylic plastics material or includes an acrylic plastics material layer.

5 Preferably the shower liner is faced with an ABS layer.

Preferably the sheet plastics material of the shower liner is of coextruded acrylic and ABS plastics.

Preferably the plastics material has been moulded while covered on that surface to be visible when the assembly is installed by a removable protective plastics film.

10 Preferably the periphery of the tray is not truncated at the corner to match the inwardly facing surface but extends fully to a corner with a plateau feature from the top of inwardly facing surface.

Preferably said raised peripheral region has two lengths thereof, mutually normal, to be set into two intersecting walls and/or framing thereof to facilitate butting and/or

15 lapping by the shower liner of the corresponding inward facing surface lengths.

Preferably said assembly or kit is substantially as hereinafter described with reference to any of the accompanying drawings.

In a further aspect the present invention consists in, *in situ*, a shower tray/shower liner assembly as previously defined.

20 In yet a further aspect the present invention consists in a method of forming a shower assembly which comprises

locating a shower tray as defined previously so that said raised peripheral region has two lengths thereof, mutually normal, set against and/or into two intersecting walls

and/or framing thereof so as to allow and/or facilitate subsequent butting and/or lapping by the shower liner of the corresponding inward facing surface lengths, and

subsequently affixing to said walls and affixing to said walls and/or framing a said shower liner as previously defined so that the lower regions thereof butt and/or lap 5 inwardly of the inwardly facing surfaces over at least part of the lengths thereof parallel to the walls defining the corner as well as that inward facing surface of the raised peripheral region which truncates the corner.

Preferably a sealant is provided between said inwardly facing surfaces and the butting and/or lapping shower liner.

10 Preferably adhesive is used between (i) said wall and/or framing and (ii) said shower liner.

In a further aspect the present invention consists in, in situ, a shower tray/shower liner assembly installed by a method as previously set forth.

15 While in preferred forms the location of the shower tray is completed or at least substantially complete before the affixing to said walls and/or framing of the shower liner this need not necessarily be so provided there is sufficient movement available to allow location of the two components in their final desired condition.

The invention consists in the foregoing and also envisages constructions of which the following gives examples.

20 One preferred form of the present invention will now be described with reference to the accompanying drawings in which;

Figure 1 illustrates a perspective view of the shower tray and shower lining, the kit set fully assembled,

Figure 2 illustrates an exploded view of the kit set shown in Figure 1,

Figure 3 illustrates an alternative shape which the tray may assume, illustrated as an exploded view,

Figure 4 illustrates a plan view of the tray in Figure 1 having the liner removed,

5 Figure 5 illustrates a side view of the tray shown in Figure 1 having the liner removed,

Figure 6 illustrates a perspective view of the tray illustrated in Figure 1 having the liner removed,

Figure 7 illustrates a plan view of an alternative shape of tray,

10 Figure 8 illustrates a side view of the tray shown in Figure 7,

Figure 9 illustrates a perspective view of the tray shown in Figure 7 and 8, the tray having an optional non-slip surface.

Figure 10 is a cross section of a region of a shower tray and of an overlapping and preferably butting shower liner, the assembly shown in part being shown set in to 15 the framing of a wall.

In the most preferred form of the invention the tray 1 is moulded from a fibreglass or sheet plastic material. The tray is provided with a drainable reservoir 5 and most preferably with a drain hole 6. The drain hole 6 may be located anywhere in the drainable reservoir however most preferably it is located at the lowermost point 20 of the drainable reservoir 5. The tray 1 is provided with a peripheral region 10 which extends from the drainable reservoir, and also extends downwardly towards the floor. Most preferably the extension of the peripheral region towards the floor is substantially vertical, however at least one of the ground extending regions of the peripheral region

may be at an alternative angle. Alternatively this substantially vertical extending region may not be existent at all, the reservoir and the peripheral region extending therefrom may be alternatively the locating means. Figure 1 illustrates the tray 1 in an assembled arrangement with the liner 2. The liner 2 may be secured to the tray 1 by a suitable adhesive means such as a glue or resin or alternatively may be secured to the tray by a penetrative means such as rivets, screws, self-tapping screws etc. Additionally the joint between the tray 1 and liner 2 may be sealed with a suitable sealant such as silicon or the like. The liner 2 consists of at least a moulded central panel region 3 and side panel regions 4. In the most preferred form the side panel regions are at substantially 5 90° to each other however they may alternatively be located at any other suitable angle. The central panel region 3 provides a truncated corner to the side panels 4 as shown in Figures 1, 2 and 3. The tray 1 also has a corresponding region onto which the liner is able to be located, including a truncated region 11. The tray 1 may itself be truncated 10 in plan view as illustrated in Figures 4, 5, 6, 7, 8 and 9 or alternatively the tray 1 may have a non-truncated corner 13 as shown in Figure 2 and 3.

The central panel region is most preferably provided with such features as a footrest 7 and/or soap holder 8 and/or shampoo holder 9. These features may be part 15 of the moulded central panel region 3 or alternatively may be inserted after the moulding of the central panel region 3.

20 The tray 1 and liner 2 are made of a moulded/mouldable material of thin wall. The tray 1 and liner 2 may be made of an acrylic plastics material on an ABS substrate. The drainable reservoir 5 may further be provided with an optional non-slip surface 12 to provide a secure region for the user to stand on. Further at least one of the panels

may have extending therethrough a means of supplying water, such as a pipe to which a showerhead may be secured.

The drainable reservoir extends downwardly to a depth so as to be able to contain a sufficient quantity of water, the reservoir having radiused corners extending to the 5 peripheral region 10.

In the preferred form of the present invention the tray 14 is positioned so that a periphery 15 locates on the floor or a bottom plate of the frame of a building with the inward facing surface 16 having lapping thereover the bottom region of a shower liner 17 preferably of coextruded ABS (inward facing surface) and an acrylic plastics 10 material. The base or tray 14 is preferably of an acrylic material.

As shown in Figure 10 a stud 18 clad with for example plaster board or some equivalent 19 can have the shower liner 17 adhesively affixed thereto by an appropriate adhesive (such as for example FOSROC™ expandite. Interposed between the inward facing surfaces and the lapping and preferably butting outwardly facing surface of the 15 shower liner is a sealant preferably a suitable silicone sealant material applied as a bead prior to the mating of the two components in situ.

The location of the shower tray can be by means (if desired) of adhesive fixing against the stud by again using a suitable adhesive such as that previously described.

Preferred acrylic materials coextruded with ABS include SENOPLAST™ 20 sourced from Austria or SPARTAK™ sourced from the United States of America. Preferably the shower liner is 3mm thick while preferably the base formed of an acrylic sheet only is 3.2mm thick. An appropriate acrylic sheeting is available from ICI plc.

**THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:**

1. A shower tray/shower liner assembly or a kit to provide such assembly adapted to be positioned in a corner defined between intersecting walls said assembly or kit comprising
  - (i) a shower tray of a sheet plastics material moulded to have a drainable reservoir bounded by a raised peripheral region, which peripheral region has the periphery of the sheet material (whether after trimming or as moulded and whether flanged or not) extending to floor level to at least partly be capable of supporting at least the raised peripheral region of the shower tray from a floor, said raised peripheral region, [except, optionally, all the way into any such a corner,] being capable of
    - (a) substantially butting the walls at or above the periphery of the sheet material or
    - (b) at least being positioned at least in part proximate to the walls or framing thereof to be covered at least in part by a shower liner
  - wherein said peripheral region also defines inwardly of said periphery as part of said peripheral region to be butting or proximate to the walls an inwardly facing surface above said reservoir which surface will run parallel to the walls except at a region thereof which angles across and thus truncates the corner, and
  - (ii) a shower liner moulded from a sheet of plastics material to define in plan view, when considered in its erected or erectable condition, an outer surface corresponding to the plan view of said inwardly facing surface against which



lower regions of said liner laps and/or butts, or are to lap and/or butt from a direction inwardly of said surface with respect to said reservoir, the shower liner thus defining three panel regions, the central panel region corresponding to the truncation of the corner provided by part of the inwardly facing surface of said shower tray, the central corner truncating panel including moulded therein at least one utility feature selected from the group comprising a soap holder, a footrest, a brush, flannel or the like holder and a shampoo holder.

2. An assembly or a kit of claim 1 wherein the plastics material of each of the tray and liner is of acrylic plastics material or includes an acrylic plastics material layer.
3. An assembly or a kit of claim 2 wherein said shower liner is faced with an ABS layer.
4. An assembly or kit of claim 3 wherein the sheet plastics material of the shower liner is of coextruded acrylic and ABS plastics.
5. An assembly or kit of any one of the preceding claims wherein the plastics material has been moulded while covered on that surface to be visible when the assembly is installed by a removable protective plastics film.
6. An assembly or kit of any one of the preceding claims wherein the periphery of the tray is not truncated at the corner to match the inwardly facing surface but extends fully to a corner with a plateau feature from the top of inwardly facing surface.
7. An assembly or kit of any one of the preceding claims wherein said raised



peripheral region has two lengths thereof, mutually normal, to be set into two intersecting walls and/or framing thereof to facilitate butting and/or lapping by the shower liner of the corresponding inward facing surface lengths.

8. An assembly or kit of any one of the preceding claims substantially as hereinbefore described with reference to any of the accompanying drawings.

9. In situ, a shower tray/shower liner assembly as claimed in any one of the preceding claims.

10. A method of forming a shower assembly which comprises locating a shower tray as defined in any one of the preceding claims so that said raised peripheral region has two lengths thereof, mutually normal, set against and/or into two intersecting walls and/or framing thereof so as to allow and/or facilitate subsequent butting and/or lapping by the shower liner of the corresponding inward facing surface lengths, and

affixing to said walls and/or framing a said shower liner as claimed in any one of the preceding claims so that the lower regions thereof butt and/or lap inwardly of the inwardly facing surfaces over at least part of the lengths thereof parallel to the walls defining the corner as well as that inwardly facing surface of the raised peripheral region which truncates the corner.

11. A method of claim 10 wherein a sealant is provided between said inwardly facing surfaces and the butting and/or lapping shower liner.

12. A method of claim 10 wherein adhesive is used between (i) said wall and/or framing and (ii) said shower liner.



13. A method as claimed in any one of claims 10 to 12 wherein an assembly  
as claimed in claim 9 results.

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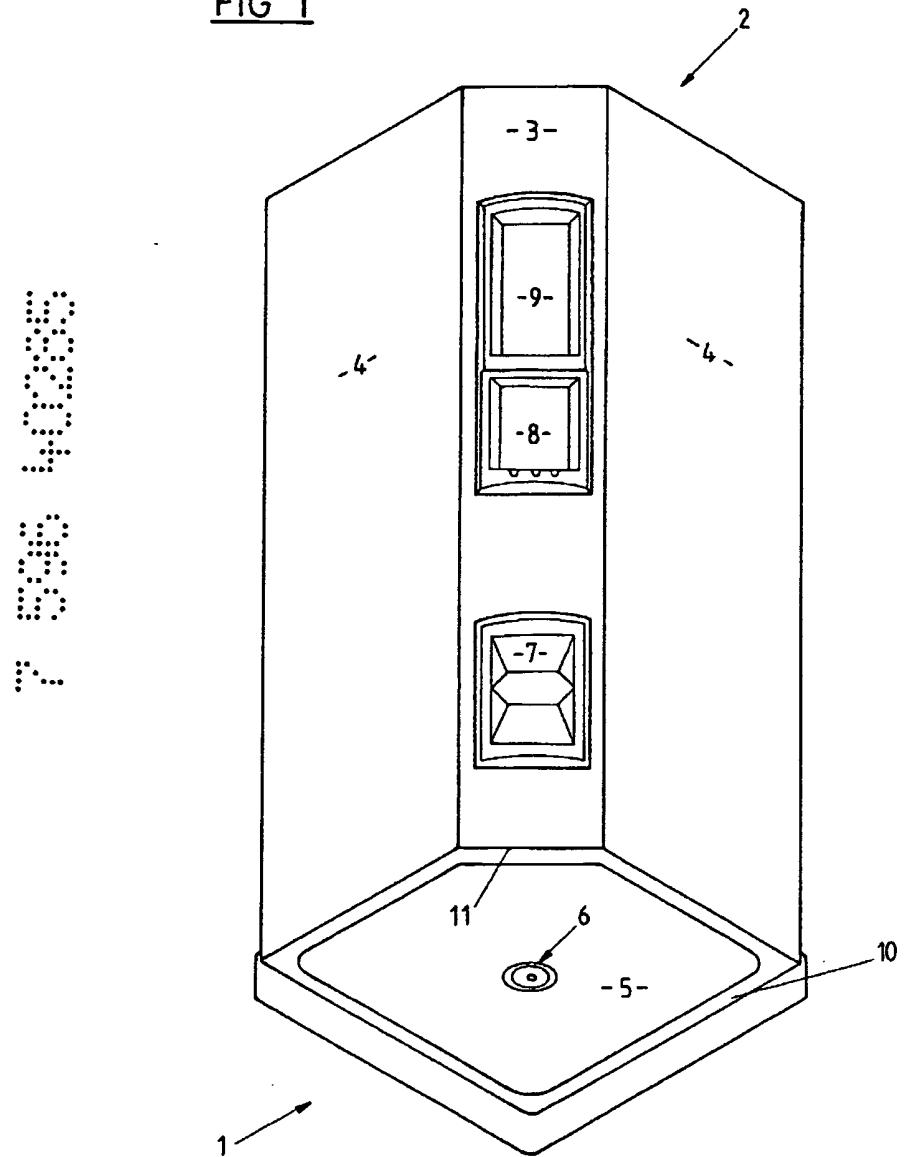
FIG. 1

FIG 2

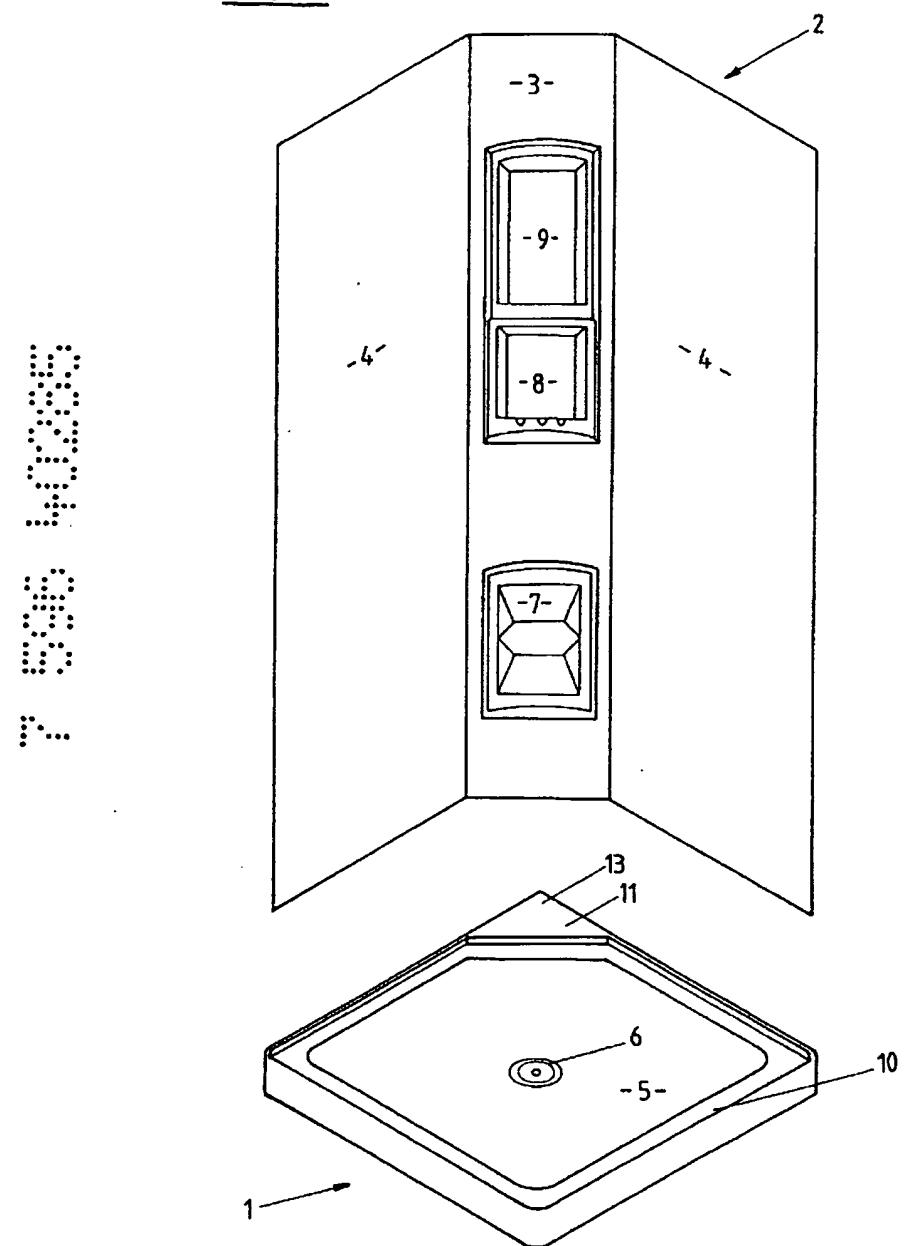


FIG 3

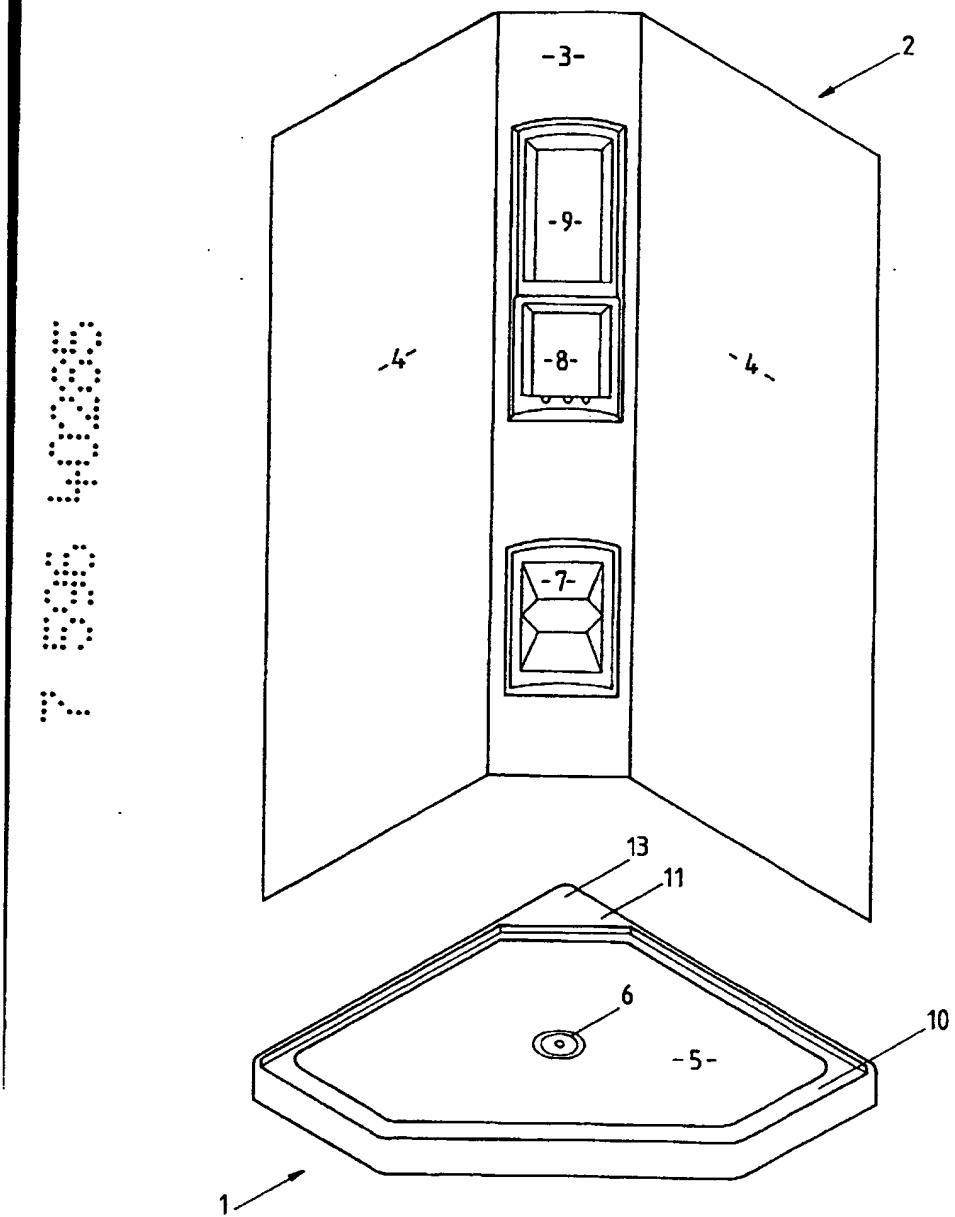
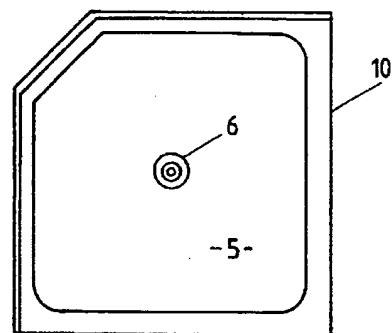


FIG 4



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FIG 5

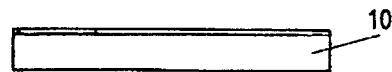


FIG 6

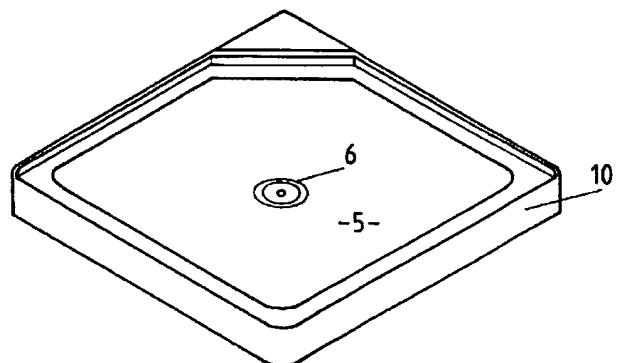


FIG 7

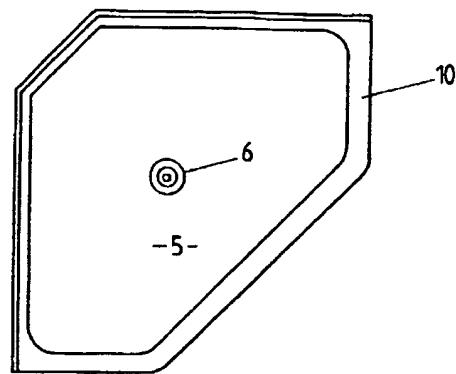


FIG 8

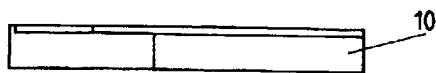
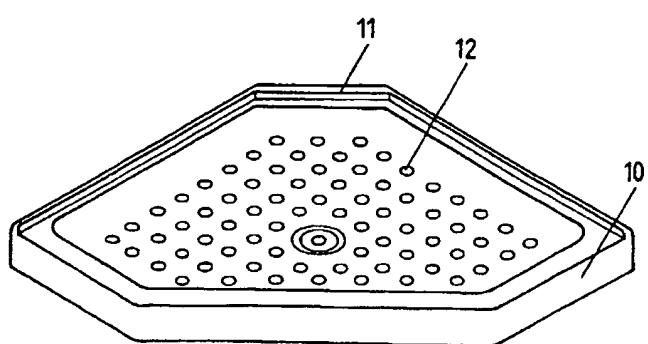


FIG 9



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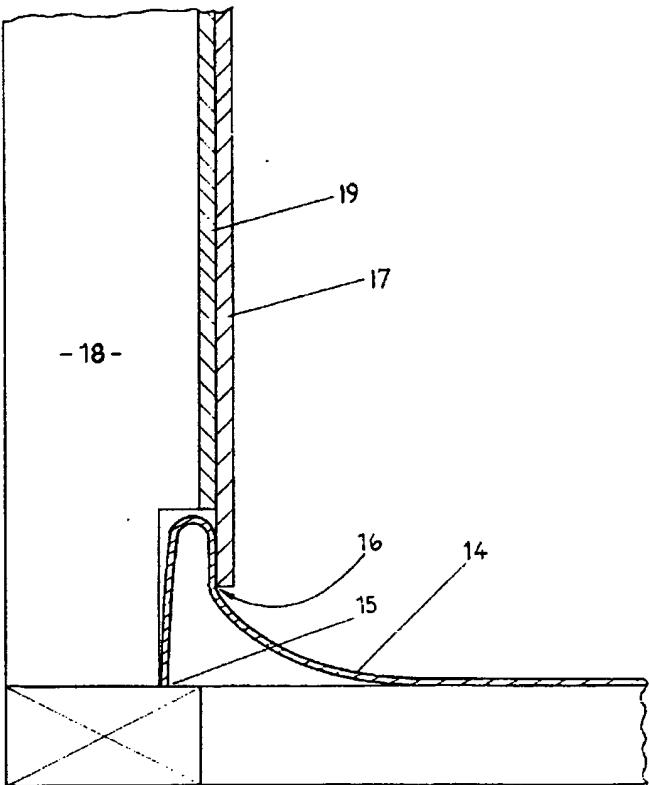


FIG. 10